State of Utah

DEPARTMENT OF ENVIRONMENTAL QUALITY
DIVISION OF AIR QUALITY

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DAQE-307-02

April 25, 2002

Mike Dalley
Environmental Manager
Staker Paving and Construction Company
P.O. Box 144820
Salt Lake City, Utah 84127-0598

Dear Mr. Dalley:

Re: Approval Order: Modification of Approval Order DAQE-152-99, to Include On-Specification Used Oil as a Fuel Source, Salt Lake County, CDS-SM, NA; MAINT; NSPS, TITLE V
Project Code: N0411-004

The attached document is the Approval Order (AO) for the above-referenced project.

Future correspondence on this Approval Order should include the engineer's name as well as the DAQE number as shown on the upper right-hand corner of this letter. Please direct any technical questions you may have on this project to Mr. Jon Black. He may be reached at (801) 536-4047.

Sincerely,

Richard W. Sprott, Executive Secretary
Utah Air Quality Board

RWS:JB:jc

cc: Salt Lake Valley Health Department
Mike Owens, EPA Region VIII

STATE OF UTAH

Department of Environmental Quality

Division of Air Quality

APPROVAL ORDER: MODIFICATION OF APPROVAL ORDER DAQE-152-99, TO INCLUDE ON-SPECIFICATION USED OIL AS A FUEL SOURCE

Prepared By: Jon Black, Engineer
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APPROVAL ORDER NUMBER

DAQE-307-02

Date: April 25, 2002

Staker Paving and Construction Company
Source Contact
Mike Dalley
(801) 951-7321

Richard W. Sprott
Executive Secretary
Utah Air Quality Board

Abstract

Staker Paving and Construction Company, formerly Geodyne Transport Inc., has submitted a Notice of Intent for a modification of Approval Order DAQE-152-99, to Include On-Specification Used Oil as a Fuel Source in their Beck Street South asphalt plant. The asphalt plant is located at 1616 North Beck Street, Salt Lake County. Salt Lake County is a nonattainment area of the National Ambient Air Quality Standards (NAAQS) for PM_{10} and SO_2, and is a maintenance area for CO and ozone. New Source Performance Standards (NSPS) 40 CFR 60 Subpart I (Standards of Performance for Hot Mix Asphalt Facilities) applies to this source. National Emission Standards for Hazardous Air Pollutants (NESHAP) and Maximum Available Control Technology (MACT) regulations do not apply to this source. Title V of the 1990 Clean Air Act applies to this source. The emissions, in tons per year, will change as follows: NO_x (+) 6.93, SO_2 (+) 15.66, CO (+) 0.33, VOC (+) 0.21, HAPs (-) 0.02. The changes in emissions will result in the following potential to emit totals: PM_{10} 21.62, NO_x 22.27, SO_2 17.99, CO 18.55, VOC 10.36, HAPs 2.21.

The project has been evaluated and found to be consistent with the requirements of the Utah Administrative Code Rule 307 (UAC R307). A public comment period was held in accordance with UAC R307-401-4 and no comments were received. This air quality Approval Order (AO) authorizes the project with the following conditions, and failure to comply with any of the conditions may constitute a violation of this order.

General Conditions:

1. This Approval Order (AO) applies to the following company:

Site Office	Corporate Office Location
Staker Paving and Construction Co.	Staker Paving and Construction Co.
1616 North Beck Street,	P.O. Box 27598
Salt Lake City, Utah 84116	Salt Lake City, Utah 84127-0598
Phone Number	(801) 298-7500
Fax Number	(801) 295-5526

The equipment listed in this AO shall be operated at the following location:

PLANT LOCATION:

1616 North Beck Street, Salt Lake County

Universal Transverse Mercator (UTM) Coordinate System: UTM Datum NAD27
4,476.8 kilometers Northing; 619.0 kilometers Easting; Zone 12

2. All definitions, terms, abbreviations, and references used in this AO conform to those used in the Utah Administrative Code (UAC) Rule 307 (R307), and Title 40 of the Code of Federal Regulations (40 CFR). Unless noted otherwise, references cited in these AO conditions refer to those rules.

3. The limits set forth in this AO shall not be exceeded without prior approval in accordance with R307-401.

4. Modifications to the equipment or processes approved by this AO that could affect the emissions covered by this AO must be approved in accordance with R307-401-1.

5. All records referenced in this AO or in applicable NSPS which are required to be kept by the owner/operator, shall be made available to the Executive Secretary or Executive Secretary's representative upon request, and the records shall include the two-year period prior to the date of the request. Records shall be kept for the following minimum periods:

A.	Used oil consumption	Three years.
B.	Emission inventories	Five years from the due date of each emission statement or until the next inventory is due, whichever is longer.
C.	All other records	Two years.

6. Staker Paving shall operate the Beck Street South asphalt plant and shall conduct its operations of the asphalt plant in accordance with the terms and conditions of this AO, which was written pursuant to Staker Paving's Notice of Intent submitted to the Division of Air Quality (DAQ) on May 7, 2001.

7. This AO shall replace the AO (DAQE-152-99) dated February 24, 1999.

8. The approved installations shall consist of the following equipment or equivalent:

   A. One (1) Astec double-drum dryer, Model RDB-400T, Mfg. 1998, rated at 475 tons per hour*

   B. One (1) Astec baghouse, Model RBH-80:TDB, Sized to handle 60,000 ACFM for the existing conditions*

   C. One (1) screen, 4' x 10'

   D. Six (6) Bituma 14' x 14' 60 ton feed bins

   E. Six (6) hot mix asphalt storage silos with bin vent

   F. Two (2) lime storage silos with bin vent

   G. Conveyors and front end loaders

   H. Four (4) Recycle Asphalt Pavement (RAP) feed bins

   * Equivalency shall be determined by the Executive Secretary or the Executive Secretary's representative.

9. The baghouse shall control process streams from the asphalt plant. All exhaust air from the asphalt plant shall be routed through the baghouse before being vented to the atmosphere.

Limitations and Tests Procedures

10. The amount of recycle asphalt used in the asphalt production shall not exceed 40% of the total product at any time. Compliance shall be determined by the actual hourly production of the plant divided by the hourly amount of recycle product introduced to the plant. Daily records maintained on site shall include:

    A. Total production
    B. Amount of recycle asphalt used in the total production
    C. Daily calculations of the percent recycle used in the total production

11. Emissions to the atmosphere at all times from the indicated emission point shall not exceed the following rates and concentrations:

Source: Asphalt Plant

Pollutant	lb/hr	grains/dscf (68 degrees F, 29.92 in Hg)
PM_{10}	7.12	0.024
PM_{10} (RAP)[1]	7.63	0.028

12. Stack testing to show compliance with the emission limitations stated in the above condition shall be performed as specified below:

A.

Emissions Point	Pollutant	Testing Status	Test Frequency
Asphalt Baghouse	PM_{10}	*	@
	PM_{10} (RAP)	*	@

B. Testing Status (To be applied above)

    * The initial testing was performed in October 1998.

    @ Test every five years. The Executive Secretary may require testing at any time. Tests may be required if the source is suspected to be in violation with other conditions of this AO. Compliance testing shall not be required for both virgin and recycle materials during the same testing period. Testing shall be performed for the product being produced during the time of testing.

C. Notification

[1] RAP - Recycle Asphalt Pavement

At least 30 days prior to conducting any emission testing required under any part of UAC, R307, the owner or operator shall notify the Executive Secretary of the date, time and place of such testing and, if determined necessary by the Executive Secretary, the owner or operator shall attend a pretest conference. A source test protocol shall be submitted to DAQ when the testing notification is submitted to the Executive Secretary. The source test protocol shall be approved by the Executive Secretary prior to performing the test(s). The source test protocol shall outline the proposed test methodologies, stack to be tested, and procedures to be used. A pretest conference shall be held, if directed by the Executive Secretary. The pretest conference shall include representation from the owner/operator, the tester, and the Executive Secretary. The emission point shall be designed to conform to the requirements of 40 CFR 60, Appendix A, Method 1, or other methods as approved by the Executive Secretary. An Occupational Safety and Health Administration (OSHA) or Mine Safety and Health Administration (MSHA) approved access shall be provided to the test location.

D. PM_{10}

For stacks in which no liquid drops are present, the following methods shall be used: 40 CFR 51, Appendix M, Methods 201 or 201a. The back half condensibles shall also be tested using the method specified by the Executive Secretary. All particulate captured shall be considered PM_{10}.

For stacks in which liquid drops are present, methods to eliminate the liquid drops should be explored. If no reasonable method to eliminate the drops exists, then the following methods shall be used: 40 CFR 60, Appendix A, Method 5, 5a, 5d, or 5e as appropriate. The back half condensibles shall also be tested using the method specified by the Executive Secretary. The portion of the front half of the catch considered PM_{10} shall be based on information in Appendix B of the fifth addition of the EPA document, AP-42, or other data acceptable to the Executive Secretary.

The back half condensibles shall not be used for compliance demonstration but shall be used for inventory purposes.

E. Volumetric Flow Rate

40 CFR 60, Appendix A, Method 2

F. Calculations

To determine mass emission rates (lb/hr, etc.) the pollutant concentration as determined by the appropriate methods above shall be multiplied by the volumetric flow rate and any necessary conversion factors determined by the Executive Secretary, to give the results in the specified units of the emission limitation.

G. New Source Operation

For a new source/emission point, the production rate during all compliance testing shall be no less than 90% of the production rate listed in this AO. If the maximum AO allowable production rate has not been achieved at the time of the test, the following procedure shall be followed:

1) Testing shall be at no less than 90% of the production rate achieved to date.

2) If the test is passed, the new maximum allowable production rate shall be 110% of the tested achieved rate, but not more than the maximum allowable production rate. This new allowable maximum production rate shall remain in effect until successfully tested at a higher rate.

3) The owner/operator shall request a higher production rate when necessary. Testing at no less than 90% of the higher rate shall be conducted. A new maximum production rate (110% of the new rate) will then be allowed if the test is successful. This process may be repeated until the maximum AO production rate is achieved.

H. Existing Source Operation

For an existing source/emission point, the production rate during all compliance testing shall be no less than 90% of the maximum production achieved in the previous three (3) years.

13. Visible emissions from the following emission points shall not exceed the following values:

A. All screens - 10% opacity
B. All conveyor transfer points - 10% opacity
C. All diesel engines - 20% opacity
D. Conveyor drop points - 20% opacity
E. All other points - 20% opacity

Opacity observations of emissions from stationary sources shall be conducted according to 40 CFR 60, Appendix A, Method 9.

For sources that are subject to NSPS, opacity shall be determined by conducting observations in accordance with 40 CFR 60.11(b) and 40 CFR 60, Appendix A, Method 9.

14. The following limits shall not be exceeded:

A. 600,000 tons of asphalt production (virgin and RAP) per rolling 12-month period.

B. 2,500 hours of asphalt plant operation per rolling 12-month period.

To determine compliance with a rolling 12-month total the owner/operator shall calculate a new 12-month total by the twentieth day of each month using data from the previous 12 months. Records of production shall be kept for all periods when the plant is in operation. Production shall be determined by truck scale records or vendor receipts. The records of production shall be kept on a daily basis. Hours of operation shall be determined by supervisor monitoring and maintaining of an operations log.

Roads and Fugitive Dust

15. All unpaved roads and other unpaved operational areas that are used by mobile equipment shall be water sprayed and/or chemically treated to control fugitive dust. The application of water or chemical treatment shall be used. Treatment shall be of sufficient frequency and quantity to maintain the surface material in a damp/moist condition. The opacity shall not exceed 20% during all times the areas are in use or unless it is below freezing. Records of water and/or chemical treatment shall be kept for all periods when the plant is in operation. The records shall include the following items:

    A. Date and time of day treatments were made
    B. Number of treatments made, dilution ratio, and quantity
    C. Rainfall received, if any, and approximate amount
    D. Time of day treatments were made
    E. Records of temperature if the temperature is below freezing

    Records of treatment shall be made available to the Executive Secretary or Executive Secretary's representative upon request and the records shall include the two-year period prior to the date of the request.

16. Control of disturbed or stripped areas shall be required at all times for the duration of the project/operation per R307-205, UAC.

17. Visible fugitive dust emissions from haul-road traffic and mobile equipment in operational areas shall not exceed 20% opacity. Visible emissions determinations for traffic sources shall use procedures similar to Method 9. The normal requirement for observations to be made at 15 second intervals over a six minute period, however, shall not apply. Six points, distributed along the length of the haul road or in the operational area, shall be chosen by the Executive Secretary or the Executive Secretary's representative. An opacity reading shall be made at each point when a vehicle passes the selected points. Opacity readings shall be made ½ vehicle length or greater behind the vehicle and at approximately ½ the height of the vehicle or greater. The accumulated six readings shall be averaged for the compliance value.

Fuels

18. The owner/operator shall use only natural gas, #2 fuel oil, and on-specification used oil as fuel in the South Beck Street asphalt plant.

19. The sulfur content of any fuel oil or diesel burned shall not exceed:

    A. 0.50 percent by weight for fuels used in the asphalt plant.

    The sulfur content shall be determined by ASTM Method D-4294-89 or approved equivalent. Certification of used oil shall be either by Staker Paving's own testing or test reports from the used oil fuel marketer.

20. Asphalt plants burning used oil for energy recovery shall comply with the following:

    A. The concentration/parameters of contaminants in any used oil fuel shall not exceed the following levels:

1)	Arsenic	5	ppm by weight
2)	Cadmium	2	ppm by weight
3)	Chromium	10	ppm by weight
4)	Lead	100	ppm by weight
5)	Total halogens	1,000	ppm by weight
6)	Barium	100	ppm by weight
7)	Sulfur	0.5	percent by weight

    B. The flash point of all used oil to be burned shall not be less than 100 °F.

    C. The owner/operator shall provide test certification for each load of used oil fuel received or generated on site. Certification shall be either by their own testing or test reports from the used oil fuel marketer. Records of used oil fuel consumption and the test reports shall be kept for all periods when the plant is in operation.

    D. Used oil that <u>does not exceed</u> any of the listed contaminants content may be burned. The owner/operator shall record the quantities of oil burned on a daily basis.

    E. Any used oil fuel <u>that contains more than 1000 ppm by weight of total halogens shall be considered a hazardous waste and shall not be burned in the boiler</u>. The oil shall be tested for halogen content by ASTM Method D-808-81, EPA Method 8240 or Method 8260 before used oil fuel is transferred to the boiler tank and burned.

    F. Sources utilizing used oil as a fuel shall comply with the State Division of Solid and Hazardous Waste in accordance with R315-15.

Federal Limitations and Requirements

21. In addition to the requirements of this AO, all applicable provisions of 40 CFR 60, New Source Performance Standards (NSPS) Subpart A, 40 CFR 60.1 to 60.18 and Subpart I, 40 CFR 60.90 to 60.60.93 (Standards of Performance for Hot Mix Asphalt Facilities) apply to this installation. To be in compliance, this facility must operate in accordance with the most current version of 40 CFR 60 applicable to this source.

Monitoring - General Process

22. The following operating parameter shall be maintained within the indicated ranges:

    A. Asphalt Plant Baghouse

        1) The static pressure differential across the fabric filter shall not be less than 2.0 inches of water column or more than 6.0 inches of water column.

    The pressure differential shall be monitored with equipment located such that an inspector/operator can safely read the output any time. The reading shall be accurate to within the following range:

    B. Pressure differential - plus or minus 1.0 inches of water

    Daily recording of the reading is required.

Records & Miscellaneous

23. At all times, including periods of startup, shutdown, and malfunction, owners and operators shall, to the extent practicable, maintain and operate any equipment approved under this Approval Order including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Executive Secretary which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source. All maintenance performed on equipment authorized by this AO shall be recorded.

24. The owner/operator shall comply with R307-150 Series. Inventories, Testing and Monitoring.

25. The owner/operator shall comply with R307-107. General Requirements: Unavoidable Breakdowns.

The Executive Secretary shall be notified in writing if the company is sold or changes its name.

This AO in no way releases the owner or operator from any liability for compliance with all other applicable federal, state, and local regulations including R307.

A copy of the rules, regulations and/or attachments addressed in this AO may be obtained by contacting the Division of Air Quality. The Utah Administrative Code R307 rules used by DAQ, the Notice of Intent (NOI) guide, and other air quality documents and forms may also be obtained on the Internet at the following web site: http://www.eq.state.ut.us/eqair/aq_home.htm

The annual emission estimations below include point source, fugitive emissions, fugitive dust, road dust, tail pipe emissions and grandfathered emissions. These emissions are for the purpose of determining the applicability of Prevention of Significant Deterioration, nonattainment area, maintenance area, and Title V source requirements of the R307. They are not to be used for determining compliance.

The Potential To Emit (PTE) emissions for this source (the entire plant) are currently calculated at the following values:

	Pollutant	Tons/yr
A.	PM_{10}	21.62
B.	SO_2	17.99
C.	NO_x	22.27
D.	CO	18.55
E.	VOC	10.36
F.	Total HAPs	2.21

Approved By:

Richard W. Sprott, Executive Secretary
Utah Air Quality Board